

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re U.S. Patent No. 7,019,132

WOO et al ) Before the Examiner:  
Serial No.: 10/718,734 ) Fedowitz, Matthew L  
Filed: November 20, 2003 ) Group Art Unit: 1623  
For: Porphyrin Derivatives )

Mail Stop CERTIFICATE OF CORRECTION  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**PETITION UNDER 1.183 REQUEST FOR CERTIFICATE OF CORRECTION TO**  
**CORRECT ASSIGNEE NAME ON LETTERS PATENT USP 7,019,132 B2**

Sir:

Applicant is hereby resending a Petition to Request a Certificate of Correction to Correct Assignee Name on Letters Patent with supporting documents for the captioned patent which was faxed to the USPTO on April 24, 2006 and again on November 30, 2006. If further information or documents are required, the Commissioner is hereby invited to contact the attorney of record at (212) 278-1307. The Commissioner is authorized to deduct any fees required by this paper to Deposit Account No. 503814.

Respectfully submitted  
Attorney for Applicant,



Dated: December 11, 2006

By:

Eugene Lieberstein, Reg. No. 24,645

CUSTOMER NO. 01109  
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## CERTIFICATE OF ELECTRONIC TRANSMISSION

It is hereby certified that this correspondence (along with any paper referenced as being attached or enclosed) is being transmitted via EFS-Web to the U.S. Patent & Trademark Office on December 11, 2006.

Audrey de Souza

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE****In re Application of**

WOO et al ) Before the Examiner  
Serial No.: 10/718,734 ) Fedowitz, Matthew L  
Filed: November 20, 2003 ) Group Art Unit: 1623  
For: Porphyrin Derivatives )

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**PETITION UNDER 1.183 REQUEST FOR CERTIFICATE OF CORRECTION TO**  
**CORRECT ASSIGNEE NAME ON LETTERS PATENT USP 7,019,132 B2**

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Sir:

This is a request for a Certificate of Correction so that the correct Assignee name be listed on the Letters Patent for the captioned patent.

We are transmitting herewith the Assignment Recordal document duly stamped by the Patent Office showing that the application was assigned from Kostarworld Co., Ltd. to Techno Mart Co., Ltd., along with a copy of the Notice of Recordation from the U.S. Patent Office showing the correct Assignee name, Techno Mart Co., Ltd.

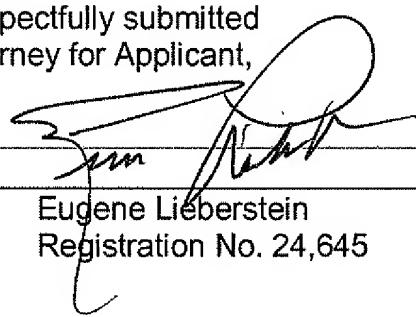
The correct name and address of the assignee is: Techno Mart Co., Ltd., 5<sup>th</sup> Floor, 546-4 Guui Dong, Kwangjin-Gu, Seoul 143-721, Republic of Korea, Recordation Date: 08/04/2005, Reel/Frame: 016857 / 0659.

Please issue a correction to the captioned Letters Patent showing the correct name of the assignee, Techno Mart Co., Ltd., as shown on the Notice of Recordation.

The Commissioner is authorized to deduct any fees required by this paper to Deposit Account No. 503814.

Respectfully submitted  
Attorney for Applicant,

Dated: April 21, 2006

By: 

Eugene Lieberstein  
Registration No. 24,645

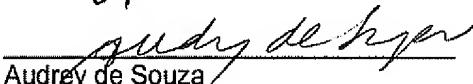
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Audrey de Souza



## UNITED STATES PATENT AND TRADEMARK OFFICE

UNDER SECRETARY OF COMMERCE FOR INTELLECTUAL PROPERTY AND  
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DECEMBER 06, 2005

PTAS



\*103057560A\*

ANDERSON, KILL & OICK, P.C.  
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RECORDATION DATE: 08/04/2005

REEL/FRAME: 016857/0659  
NUMBER OF PAGES: 3

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:  
KOSTARWORLD CO., LTD.

DOC DATE: 05/21/2005

ASSIGNEE:  
TECHNO MART CO., LTD.  
5TH FLOOR, 546-4 GUUI DONG  
KWANGJIN-GU, SEOUL 143-721.

REPUBLIC OF KOREA

SERIAL NUMBER: 10718734

FILING DATE: 11/20/2003

PATENT NUMBER:

ISSUE DATE:

TITLE: PORPHYRIN DERIVATIVES

016857/0659 PAGE 2

PAULA MCCRAY, EXAMINER  
ASSIGNMENT DIVISION  
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08-09-2005

DEPARTMENT OF COMMERCE  
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103057560

HEET U.S.

Patent

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

1. Name of conveying party(ies) Kostarworld Co., Ltd. Additional name(s) of conveying party(ies) attached? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	2. Name and address of receiving party(ies)  Name: Techno Mart Co., Ltd. Internal Address: Street Address: 5 <sup>th</sup> Floor, 546-4 Guui Dong City: Kwangjin-Gu, Seoul 143-721 Republic of Korea  Additional name(s) & address(es) attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
3. Nature of conveyance: <input checked="" type="checkbox"/> Assignment <input type="checkbox"/> Security Agreement <input type="checkbox"/> Merger <input type="checkbox"/> Change of Name <input type="checkbox"/> Other  Execution Date: May 21, 2005	
4. Application number(s) or patent number(s): 10/718,734  If this document is being filed together with a new application, the execution date of the application is:	
A. Patent Application No.(s)	B. Patent No.(s)
Additional numbers attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Name and address of party to whom correspondence concerning document should be mailed:  Name: David A. Einhorn, Esq. Internal Address: ANDERSON, KILL & OLICK, P.C. Street Address: 1251 Avenue of the Americas 42nd Floor City: NEW YORK State: N.Y. Zip: 10020-1182	6. Total number of applications and patents involved <input type="checkbox"/> 1  7. Total fee (37 CFR 3.41) ..... \$ 40.00 <input type="checkbox"/> Enclosed <input checked="" type="checkbox"/> Authorized to be charged to deposit account #01-1944
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To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Eugene Lieberstein  
REG. NO.: 24,645

Name of Person Signing

Signature

July 11, 2005

Date

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08/08/2005 ECOOPER 00000010 011944 10716734

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(12) United States Patent  
Woo et al.(10) Patent No.: US 7,019,132 B2  
(45) Date of Patent: Mar. 28, 2006

## (54) PORPHYRIN DERIVATIVES

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(73) Assignee: Kostarworld Co., Ltd., (KR)

(\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: 10/718,734

(22) Filed: Nov. 20, 2003

## (65) Prior Publication Data

US 2004/0142917 A1 Jul. 22, 2004

## (30) Foreign Application Priority Data

Jan. 16, 2003 (KR) ..... 10-2003-0002921  
Jan. 16, 2003 (KR) ..... 10-2003-0002922

## (51) Int. Cl.

C07B 47/00 (2006.01)

(52) U.S. Cl. ..... 540/145; 534/15; 424/9.362;  
424/9.61; 514/185; 514/410

(58) Field of Classification Search ..... 540/145;  
534/15; 514/185, 410; 424/9.1

See application file for complete search history.

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Hynninen et al. Tracing the Allomerization Pathways of Chlorophylls by  $\gamma$ -Labeling and Mass Spectrometry., May 18, 2002., Journal of Organic Chemistry, 67 pp. 4055-4061.\*

Wasielewski et al. Synthesis of Covalently Linked Dimeric Derivatives of Chlorophyll a, Pyrochlorophyll a, Chlorophyll a, and Bacteriochlorophyll a. 1980. Journal of Organic Chemistry, 45 pp. 1969-1974.\*

Holt, A.S. The Phase Test Intermediate and the Allomerization of Chlorophyll a. 1958. Canadian Journal of Biochemistry and Physiology, 36 pp. 439-456.\*

\* cited by examiner

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## (57) ABSTRACT

The present invention is related to novel photopyrin compounds and the pharmaceutically acceptable salt thereof useful as an anticancer or photodynamic diagnostic agent by way of reproducing singlet state oxygen radical and the inventive compounds have superior advantages such as excellent photon yield to produce singlet oxygen, good physical stability and potent cell cytotoxicity to conventional photosensitizer. The present invention also provides a pharmaceutical composition comprising a novel photopyrin compound of formula (I) to (VII) or a pharmaceutically acceptable salt thereof as an active ingredient for preventing or treating various cancers such as stomach cancer, liver cancer, lung cancer, cervical cancer and breast cancer in human or mammal together with a pharmaceutically acceptable carrier.

3 Claims, 10 Drawing Sheets

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